



2° CONGRESSO SOCIETÀ GEOCHIMICA ITALIANA

FROM THEORETICAL TO APPLIED GEOCHEMISTRY

PERUGIA • 01 - 04 LUGLIO 2024

PROGRAM



SESSIONS

COMPUTATIONAL AND EXPERIMENTAL GEOCHEMISTRY

Conveners: Devis Di Tommaso (Queen Mary University of London); Caterina Gozzi (DST, Università di Firenze); Mattia La Fortezza (DISTAV, Università di Genova)

Whether it is for the determination of the thermodynamic properties of crystalline solids and fluids of various origin or for the study of the reaction rates involved in a variety of geochemical processes, both experimental and computational-modelling approaches are fundamental to the quantification of the physico-chemical parameters necessary to describe several natural systems. The use of high-resolution microscopic and spectroscopic techniques, such as those based on synchrotron radiation or neutron scattering, together with the need to understand complex phenomena at the atomic-molecular level, have led to a growing integration between increasingly powerful molecular simulations based on classical (Monte Carlo, molecular dynamics) and quantum mechanical models and state-of-the-art experimental methods. In addition, the recent advances in numerical-computational techniques allowed more accurate interpretations of experimental data, inspiring the design of specific experiments aimed at developing geochemical models that better describe the investigated reactions and processes.

This session brings together contributions from the field of thermodynamics and geochemical modelling in the broad sense along with studies based on a large range of experimental techniques and emphasizing the complementarity of the two approaches. It is thus open to a large spectrum of geochemical topics, such as: the study of the thermodynamic properties of crystalline solids and aqueous species; the determination of the isotopic fractionation of chemical species between solid phase and aqueous solution; the study of the mechanisms and kinetics of chemical weathering; the modelling of nucleation and crystal growth; the link between molecular simulations of the mineral-fluid interface and kinetic models of crystal growth; the development of reactive transport models from experimental observations; the use of statistical methods for compositional data analysis. Contribution from young researchers is particularly encouraged.

ENVIRONMENTAL GEOCHEMISTRY

Conveners: Maurizio Barbieri (DST, Università La Sapienza); Elisabetta Dore (DSCG, Università di Cagliari); Nicolas Greggio (BiGeA, Università di Bologna)

Attention to the environment and its problems has experienced an unprecedented growth in recent years. The reason is mainly due to a reinterpretation of the relationship between man and the environment, which has favoured a changed attitude toward environmental problems and has opened new opportunities for scientific research. The environmental geochemistry session intends to focus on studying the geochemical behaviour of potentially toxic elements and compounds in the five spheres constituting the environment (hydrosphere, atmosphere, geosphere, biosphere and anthroposphere) to evaluate their sources, distribution, and interactions. These five spheres, closely interconnected and in mutual interaction, influence each other and constantly exchange matter, energy, and consequently, potentially toxic elements and compounds. Much of this interaction occurs through biogeochemical cycles in which different processes are active, with an increasing role of the anthroposphere over time. The most important and worrying example is climate change induced by the release of greenhouse gases into the atmosphere and related extreme events indeed exacerbate the negative trend in water quality.

Within this framework, particularly relevant are the geochemical and isotopic studies concerning the interaction between humans and the environment impacting to their co-evolution at the short- to medium- timescales. In particular, Isotope Geochemistry is increasingly being used in scientific investigations, from the study of the isotopic fingerprints of rocks, soils, fluids, and other matrices (i.e., bulk analyses) to the study of the isotopic variations at high-spatial resolution (e.g., in-situ techniques). The session is dedicated to the multiple aspects of environmental geochemistry, such as water-rock interaction processes, anthropogenic effects on environmental matrices (with respect to the natural geochemical background), air quality assessment, impact on human health, and biogeochemical prospecting in natural and polluted environments.

GEOCHEMISTRY IN VOLCANIC, GEOTHERMAL AND SEISMIC AREAS

Conveners: Alessandra Correale (INGV, Sezione di Palermo); Anna Gioncada (DST, Università di Pisa); Andrea Ricci (INGV, Sezione di Palermo)

This session delves into the intricate interplay between geological processes and chemical and isotopic signatures of rocks and fluids in dynamic earth systems. Volcanic, geothermal, and seismic regions offer unique windows into Earth's subsurface processes, presenting opportunities to unravel fundamental geochemical mechanisms and their implications for hazard assessment, georesources exploration, and environmental monitoring.

In volcanic settings, geochemical investigations provide insights into magma genesis, evolution, and eruption dynamics. Understanding volatile fluxes from the mantle to the Earth's surface, element partitioning, and isotopic compositions provides valuable insights into eruption forecasting, magma storage conditions, and the evolution of volcanic systems. Furthermore, geochemical monitoring aids in assessing volcanic hazards, such as gas emissions, ash fallout, and lava flows, and is crucial for mitigating risks to human populations and infrastructure.

Geothermal areas serve as natural laboratories for exploring heat and fluid flow through Earth's crust. Geochemical tracers unveil subsurface fluid-rock interactions, reservoir connectivity, and geothermal resource potential. Isotopic analyses elucidate fluid origins, circulation pathways, and thermal histories, guiding sustainable geothermal energy production and reservoir management strategies.

Seismic zones exhibit complex interactions between tectonic forces, rock deformation, and fluid migration. Geochemical investigations elucidate fault zone processes, stress-induced reactions, and seismicity-triggered fluid release. Isotopic signatures in seismic fluids offer clues to seismic precursors, fault reactivation, and earthquake nucleation, enhancing our understanding of earthquake dynamics and hazard assessment.

This session provides a platform for researchers to exchange knowledge, methodologies, and case studies on geochemical investigations in volcanic, geothermal, and seismic environments. We enthusiastically welcome contributions focusing on the importance, recent advances, and applications of geochemistry using data from natural case studies, laboratory experiments, theoretical calculations, geochemical models, and integrated approaches. Furthermore, contributions presenting methodological and technological developments are also welcomed.

COSMOCHEMISTRY AND PLANETARY SCIENCES

Conveners: Nadia Balucani (DCBB, Università di Perugia); Martina Casalini (DST, Università di Firenze); Maximiliano Fastelli (FISGEO, Università di Perugia)

The study of the formation, evolution, and current functioning of various environments within the solar system and beyond is crucial for gaining insights into the composition, evolutionary history, and dynamics of celestial bodies. These studies involve analyzing samples such as meteorites and materials from space missions, along with observations collected by missions on various celestial bodies. This session centres on the comprehensive examination of planets, planetary systems, their forming processes, and potential habitability. Cosmochemistry and planetary science are profoundly interdisciplinary fields, incorporating knowledge from various disciplines such as planetary astronomy, geology, geochemistry, astrobiology, geophysics, atmosphere analysis and the study of extrasolar planets. This session aims to gather all kinds of planetary studies, including geochemical models reconstructing planetary interior or theoretical studies on mineral physics. It also encompasses research on possible life in space or in the field of exoplanets. Additionally, we welcome the analysis of meteoritic material, the spectral characterization of planetary analogues and the interpretation of spectral features observed through spacecrafts and rovers on celestial bodies. Researchers from diverse scientific backgrounds are invited to actively participate in this session. The aim is to foster constructive discussions and provide the opportunity to cultivate multi-disciplinary collaborations.

Monday July 1, 2024**MORNING**

11:00-14:00 Registration

AFTERNOON

14:30-14:45 Congress Opening

14:45-15:00 **So.Ge.I. PhD Awards Ceremony**15:00-15:15 **Tongiorgi Award***Best PhD Thesis in Isotope Geochemistry*15:15-15:30 **Tonani Award***Best PhD Thesis in Applied Geochemistry*15:30-15:45 **Panichi Award***Best PhD Thesis in Hydrogeochemistry*15:45-16:00 **Galli Award***Best PhD Thesis in Geochemistry of Magmatic Processes*16:00-17:00 **Maria Cristina De Sanctis [PLENARY]***Ceres: the innermost water rich world*

17:00-17:30 Coffee Break

17:30-18:30 **Donato Giovannelli [PLENARY]***Geosphere-Biosphere interactions: 10 ways biology interacts with the solid Earth*19:30-22:00 **ICEBREAKER**

Tuesday July 2, 2024

MORNING

COMPUTATIONAL AND EXPERIMENTAL GEOCHEMISTRY

Conveners: Devis Di Tommaso (Queen Mary University of London); Caterina Gozzi (DST, Università di Firenze); Mattia La Fortezza (DISTAV, Università di Genova)

- 08:30-09:00 **Giulio Ottonello** [INVITED SPEAKER]
The CMAS simplex
- 09:00-09:15 **Andrea Pierozzi**, Remi Rateau, Andrea Orlando, Daniele Borriani, Franco Tassi, Juan Diego Rodriguez Blanco
A mineralogical and geochemical approach for assessing the redox capacity of basaltic glass and crystals via experimental evaluation
- 09:15-09:30 **Micaela Raviola**, Marino Vetuschi Zuccolini
Real time ammonium ion-selective electrode correction through speciation calculation in seawater
- 09:30-09:45 **Barbara Cantucci**, Alessandra Sciarra, Giulio Di Toro, Rodrigo Gomila, Fausto Grassa, Monica Piochi, Tullio Ricci, Lorenzo Brusca, Sergio Bellomo
The SCHOTTA Project: experimental, analytical and modeling studies of the seismic cycle under hydrothermal conditions
- 09:45-10:00 **Giordano Montegrossi**, Francesco Di Benedetto, Federica Meloni, Alessandro Veneri, Andrea Giaccherini, Matteo Mannini, Matteo Ardit
Aqueous Phase Stability of Cu-Fe-Zn-Sn-S: A Computational Thermodynamics Perspective
- 10:00-10:30 Coffee Break

COSMOCHEMISTRY AND PLANETARY SCIENCES

Conveners: Nadia Balucani (DCBB, Università di Perugia); Martina Casalini (DST, Università di Firenze); Maximiliano Fastelli (FISGEO, Università di Perugia)

- 10:30-11:00 **Valentina Galluzzi** [INVITED SPEAKER]
Geological Map Series of Mercury: from science to science-planning of the BepiColombo mission
- 11:00-11:15 **Andrea Giustini**, Nadia Balucani, Gabriella Di Genova, Marzio Rosi
Theoretical insights on the S(1D) + H₂O reaction and implications on the chemistry at the surface of ice in extraterrestrial environments
- 11:15-11:30 **Giacomo Pannacci**, Gianmarco Vanuzzo, Pedro Recio, Adriana Caracciolo, Piergiorgio Casavecchia, Nadia Balucani
The role of oxygen atoms in space organic chemistry: the case of O(3P,1D) + small aromatics reactions
- 11:30-11:45 **Luca Mancini**, Gianmarco Vanuzzo, Giacomo Pannacci, Marzio Rosi, Dimitrios Skouteris, Piergiorgio Casavecchia, Nadia Balucani
A combined investigation of the reactions of N(2D) with small aromatic compounds and implications for the chemistry of Titan's atmosphere
- 11:45-12:00 **Martina Casalini**, Alessio Battagli, Riccardo Avanzinelli, Tiberio Cuppone, Antonio Langone, Giovanni Pratesi, Cristian Carli, Federico Tosi
A journey from the Moon and back through petro-mineralogical and geochemical investigation of lunar meteorites

- 12:00-12:15 **Lisa Tagliacollo**, Costanza Bonadiman, Valentina Brombin, Giacomo Permunian, Renzo Tassinari
Platinum-Group Elements (PGEs) determination in Canyon Diablo meteorite
- 12:15-12:30 **Marco Baroni**, Beatrice Baschetti, Alessandro Pisello, Matteo Massironi, Maurizio Petrelli
FRESCO, a Python open-source tool to map, select, extract and analyze CRISM spectral data
- 12:30-12:45 **Maximiliano Fastelli**, Bernard Schmitt, Pierre Beck, Olivier Poch, Azzurra Zucchini, Paola Comodi
Reflectance spectra of mascagnite and salammoniac minerals with varying viewing geometry
- 12:45-14:30 Lunch Break

AFTERNOON

- 14:30-15:30 **Andrea Bravo [PLENARY]**
Organic matter composition control the formation of methylmercury: a cross system overview

ENVIRONMENTAL GEOCHEMISTRY

Conveners: Maurizio Barbieri (DST, Università La Sapienza); Elisabetta Dore (DSCG, Università di Cagliari); Nicolas Greggio (BiGeA, Università di Bologna)

- 15:30-15:45 **Maura Pellegrini**
IRMS - How the future looks like
- 15:45-16:00 **Ilaria Rocchetti**, Manuela Portaro, Paola Tuccimei, Gianfranco Galli, Michele Soligo, Cristina Longoni, Dino Vasquez
Effect of energy efficiency measures on indoor radon with the model room approach
- 16:00-16:15 **Manuela Portaro**, Ilaria Rocchetti, Paola Tuccimei, Gianfranco Galli, Michele Soligo, Cristina Longoni, Dino Vasquez
Thermal coats and changing environmental conditions affect indoor/outdoor radon exchange dynamics and indoor radon levels
- 16:15-16:30 **Biagi Rebecca**, Venturi Stefania, Randazzo Antonio, Capecchiacci Francesco, Vaselli Orlando, Tassi Franco
Air quality monitoring in environments affected by biogenic, volcanic-hydrothermal and anthropogenic gas emissions: revealing insights using traditional and low-cost techniques
- 16:30-16:45 **Gregorio Viti**, Antonio Randazzo, Stefania Venturi, Fabio Tatàno, Franco Tassi
Degradation index for landfill gas species to quantify the biodegradation efficiency of novel landfill biocover soils
- 16:45-17:00 **Filippo Brugnone**, Walter D'Alessandro, Lorenzo Brusca, Filippo Saiano, Sergio Bellomo, Salvatore Dominech, Francesco Tripodi, Anna Maria Abita, Salvatore Giammanco, Francesco Parello, Sergio Calabrese
Bulk atmospheric deposition fluxes over Sicily: relative distribution between three different fractions
- 17:00-17:15 **Stefano Natali**, Marco Doveri, Roberto Giannecchini, Marco Luppichini, Ilaria Isola, Giovanni Zanchetta
Where does humidity come from? Moisture uptake analysis and stable isotope composition of single precipitation events (northern Tuscany)
- 17:15-17:45 Coffee Break

- 17:45-18:00 **Stefania Franchini**, Maurizio Barbieri, Giuseppe Sappa
The use of water isotopes as environmental tracers in contamination phenomena between aquifers and leachate in municipal solid waste landfills
- 18:00-18:15 **Dino Di Renzo**, Elena Marrocchino, Chiara Telloli, Daniele Cinti, Carmela Vaccaro
Multidisciplinary hydrogeochemical and isotopic assessment of the Pordenone Plain (Northeastern Italy)
- 18:15-18:30 **Silvia Fornasaro**, Lisa Ghezzi, Alessio Tomei, Margherita Cogorno, Nosir Shukurov, Maxim Petrov, Riccardo Petrini
Dissolved load in the Chirchik and Akhangaran river basins (Uzbekistan, Central Asia): Natural and anthropic inputs
- 18:30-19:15 **POSTER SESSION**

Wednesday July 3, 2024

MORNING

ENVIRONMENTAL GEOCHEMISTRY

Conveners: Maurizio Barbieri (DST, Università La Sapienza); Elisabetta Dore (DSCG, Università di Cagliari); Nicolas Greggio (BiGeA, Università di Bologna)

- 08:30-09:00 **Mauro Masiol** [INVITED SPEAKER]
Particulate matter pollution in an Alpine Valley: long-term trends, source apportionment using specific tracers, and the effect persistent inversion dynamic
- 09:00-09:15 **Chemerì Lorenzo**, Taussi Marco, Cabassi Jacopo, Nisi Barbara, Vaselli Orlando, Venturi Stefania
Application of chemical quality trends over time and space as a tool to evaluate river geochemical evolution and contamination
- 09:15-09:30 **Martina Ferrari**, Antonella Buccianti, Caterina Gozzi, Franco Tassi, Stefania Venturi, Orlando Vaselli
A comparison of traditional and innovative tools for the geochemical characterisation of surface waters: the case study of the Serchio River Basin (northern Tuscany)
- 09:30-09:45 **Francesca Giannetti**, Caterina Gozzi, Stefania Venturi, Claudio Natali, Valentina Rimondi, Guia Morelli, Orlando Vaselli, Franco Tassi, Chiara Maccelli, Francesco Capecchiacci, Federica Meloni, Jacopo Cabassi, Gerd Rantitsch, Robert Scholger, Nicholas Redi, Martina Ferrari, Antonella Buccianti, Riccardo Avanzinelli
PTEs in river ecosystems: exploring their natural and anthropogenic sources in the Ombrone Grossetano River Basin (OGRB, Italy)
- 09:45-10:00 **Lisa Tagliacollo**, Costanza Bonadiman, Emilio Saccani, Gianluca Bianchini, Valentina Brombin, Renzo Tassinari
Critical Raw Materials (CRMs) investigation in dismissed historical Volcanogenic Massive Sulfide (VMS) deposits in the Northern Apennine (Italy)
- 10:00-10:15 **Federica Lo Medico**, Daniela Varrica, Giovanna Scopelliti, Marino Vetuschi Zuccolini, Marianna Miola, Maria Grazia Alaimo
Geochemical Background Values and Spatial Distribution of Major and Trace elements in unpolluted soils of Sicilian Region (Italy)
- 10:15-10:30 **Maurizio Testa**, Roberto Dessi, Fabrizio Alfano, Patrizia Chessa, Veronica Corda, Giovanni De Giudici, Martina Demurtas, Stefania Massidda, Patrizia Olla, Veronica Pili, Gabriele Uras
Hydrogeological and geochemical study of surface groundwater and baseline values in the Nuraxi Figus area (SW Sardinia)
- 10:30-11:00 Coffee Break
- 11:00-11:15 **Roberto Dessi**, Fabrizio Alfano, Patrizia Chessa, Veronica Corda, Giovanni De Giudici, Martina Demurtas, Enrico Mantega, Stefania Massidda, Patrizia Olla, Veronica Pili, Maurizio Testa, Gabriele Uras
Soil background values at abandoned mining areas in the Paleozoic "Metallifero Region", SouthWest of Sardinia
- 11:15-11:30 **Federica Meloni**, Enrico Dinelli, Barbara Nisi, Jacopo Cabassi, Daniele Rappuoli, Orlando Vaselli
Geochemical Characterization and Distribution of Potentially Toxic Elements in Stream Sediments: Insights from the Former Mercury Mining District of Mt. Amiata, Central Italy

- 11:30-11:45 **Federico Floreani**, Elena Pavoni, Elisa Petranich, Mara Mauri, Sergio Predonzani, Stefano Covelli
Risk analysis in alluvial soils contaminated by mercury from historical mining activities through metal speciation: a comparison between thermo-desorption and selective sequential extraction
- 11:45-12:00 **Elena Pavoni**, Federico Floreani, Francesca Gri Marizza, Daniela Berto, Claudia Gion, Stefano Fornasaro, Giovanna Marussi, Nicolas Greggio, Stefano Covelli
Biochar as a sustainable amendment to mitigate mercury mobility at the sediment-water interface: evidences from incubation experiments using benthic chambers
- 12:00-12:15 **Stefano Covelli**, Chiara Pisoni, Elena Pavoni, Federico Floreani, Elisa Petranich, Michela Dal Cin, Michele Deponte, Emiliano Gordini, Martina Busetti
Identification of anthropogenic and geogenic contributions of trace metal(loid)s in coastal sediments through a geochemical normalisation approach based on regional background values (Gulf of Trieste, northern Adriatic Sea)
- 12:15-12:30 **Valerio Funari**, Simone Toller, Francesca Ape, Antonio Mercadante, Antimo Angelino, Francesco Riminucci, Nicolas Greggio, Marina Iorio, Yago Nestola, Enrico Dinelli
Geochemical characterization of marine sediments from a maritime area around Elba-Argentario Basin (Thyrrhenian Sea, Italy)
- 12:30-12:45 **Nicolas Greggio**, Denis Zannoni, Alessandro Buscaroli, Enrico Dinelli
Geochemical characterization of the recent deposits from the May 2023 Romagna flood and comparison with local deeper deposits
- 12:45-13:00 **Nicolas Greggio**, Alessandro Folegatti, Denis Zannoni, Alessandro Buscaroli, Enrico Dinelli
Geochemical characterisation of 'road dust' in the urban area of Ravenna (Italy)
- 13:00-14:30 Lunch Break
- AFTERNOON**
- 14:30-14:45 Giovanni Birarda, Valentina Bonanni, Carla Buosi, Francesca Caridi, Elisa Costanzi, Giovanni De Giudici, Alessandra Gianoncelli, Elena Longo, Pier Andrea Marras, **Daniela Medas**, Carlo Meneghini, Patrizia Onnis, Samuele Pili, Tiziana Pivetta, Anna Sabbatini, Giuliana Tromba, Lisa Vaccari, Milan Zizic
Potential effects of plastics and nicotine on carbon storage capacity of calcifying marine foraminifera
- 14:45-15:00 **Andrea Bisciotti**, Valentina Brombin, Gianluca Bianchini, Giuseppe Cruciani
Ceramic components in Construction and Demolition Waste: an analysis of their effects on the environment in relation to the new Italian End of Waste directive
- 15:00-15:15 **Marianna Miola**, Daniela Cabiddu, Simone Pittaluga, Marino Vetuschi Zuccolini
MUSE: a computational tool to support spatio-temporal uncertainty evaluation in Geochemistry

15:15-16:15

Tobias Fischer [PLENARY]*The Deep Carbon Cycle: Perspectives from Volcanic Degassing***GEOCHEMISTRY IN VOLCANIC, GEOTHERMAL AND SEISMIC AREAS****Conveners: Alessandra Correale (INGV, Sezione di Palermo); Anna Gioncada (DST, Università di Pisa); Andrea Ricci (INGV, Sezione di Palermo)**

16:15-16:30

Dario Buttitta, Emilyne Beaudet, Lili Loth, Giorgio Capasso, Michele Paternoster, Antonio Caracausi*Fluid-rock interaction: the carbon dioxide (CO₂) origin camouflage*

16:30-16:45

Luca Pizzino, Marino Domenico Barberio, Daniele Cinti, Fausto Grassa, Alessandra Sciarra*The Irpinia Groundwater Monitoring Network in the frame of the Myburp Project: first results from cold and thermal waters in a seismically active sector of southern Apennines (Campania region, Italy)*

16:45-17:00

Filippo Zummo, Fabrizio Agosta, Antonio M. Álvarez Valero, Andrea Billi, Dario Buttitta, Antonio Caracausi, Gabriele Carnevale, Barbara Marchesini, Michele Paternoster*Tracing a mantle component in paleofluids along the seismogenic faults of the Irpinia region (southern Italy)*

17:00-17:30

Coffee Break

17:30-17:45

Paolo Randazzo, Antonio Caracausi, Alessandro Aiuppa, Carlo Cardellini, Giovanni Chiodini, Carmine Apollaro, Michele Paternoster, Angelo Rosiello, Giovanni Vespasiano*Active degassing of crustal CO₂ in areas of tectonic collision: A case study from the Pollino and Calabria sectors (Southern Italy)*

17:45-18:00

Mauro Tieri, Carlo Cardellini, Giovanni Chiodini, Stefano Caliro, Francesco Frondini, Daniele Cinti, Domenico Barberio, Dino Di Renzo, Alessandro Santi, Emilio Cuoco, Francesco Rufino, Antonio Caracausi*Study of groundwater and superficial water in tectonically active regions: quantification of deep CO₂ emissions and geochemical monitoring of seismic activity*

18:00-18:15

Li Vigni Lorenza, Temovski Marjan, Molnár Kata, Cardellini Carlo, D'Alessandro Walter*Geogenic degassing from the tectonic area of North Macedonia*

18:30-19:15

POSTER SESSION

20:30-23:00

SOCIAL DINNER

Thursday July 4, 2024

MORNING

GEOCHEMISTRY IN VOLCANIC, GEOTHERMAL AND SEISMIC AREAS

Conveners: Alessandra Correale (INGV, Sezione di Palermo); Anna Gioncada (DST, Università di Pisa); Andrea Ricci (INGV, Sezione di Palermo)

- 08:30-09:00 **Sergio Calabrese** [INVITED SPEAKER]
Nyiragongo, "The Forbidden Volcano". Ten years of geochemical investigation
- 09:00-09:15 **Gianluigi Ortenzi**, Nicole Bobrowski, Jonas Kuhn, Tjarda Roberts, Alexander Nies
Numerical modelling of the volcanic plume composition: applications to estimate the chemistry of the volcanic outgassing compared to field measurements
- 09:15-09:30 **Cinzia Federico**, Antonio Paonita, Sergio Bellomo, Leonardo La Pica, Roberto Maria Rosario Di Martino, Alessandro Gattuso, Giovannella Pecoraino, Antonino Pisciotta, Francesco Sortino
The 2021-22 unrest of La Fossa volcano (Vulcano Island, Aeolian Archipelago) by the side of fumarole chemistry: clues on the magmatic source in the prodromal and ongoing phases
- 09:30-09:45 **Giovanni Chiodini**, Stefano Caliro, Carlo Cardellini, Rosario Avino, Giulio Bini, Antonio Carandente, Emilio Cuoco, Carmine Minopoli, Tullio Ricci, Francesco Rufino, Alessandro Santi, Alessandra Sciarra, Giancarlo Tamburello, Alessandro Aiuppa
Forty years of geochemical data at Solfatara, Campi Flegrei
- 09:45-10:00 **Luigi Marini**, Claudia Principe, Matteo Lelli
Are we able to listen what the fumarolic fluids of the Solfatara have been telling us for about 40 years?
- 10:00-10:15 **Francesco Sortino**, Lorenzo Calderone, Salvatore Giammanco, Carmelo Ferlito
Monitoring fumarole emissions on the flanks of Mount Etna and correlation with volcanic activity
- 10:15-10:30 **Roberto Moretti**, Manuel Inostroza Pizarro
The effects of elemental sulfur precipitation/dissolution in low-temperature geothermal systems: refined H_2 - H_2S - H_2O gas indicators with application to La Soufrière de Guadeloupe (Lesser Antilles)
- 10:30-10:45 **Francesca Amico**, Fátima Viveiros, Franco Tassi, Antonio Randazzo, Eleonora Baldoni
Characterization of CO_2 and CH_4 diffuse degassing from Furnas Lake hydrothermal area, São Miguel Island (Azores, Portugal)
- 10:45-11:00 **Francesco Narduzzi**, Simone Pollastri, Federico Floreani, Stefano Covelli, Mattia Pistone, Gangadhar Das, Ana Černok, Marco Beltrame, Marco Venier, Giuliana Aquilanti, Luca Ziberna
Mercury in shallow silicic magma reservoirs: Lessons from Valle Mosso Pluton (Western Alps, Italy)
- 11:00-11:30 Coffee Break
- 11:30-11:45 **Monia Procesi**, Barbara Cantucci, Giovannella Pecoraino, Maria Giulia Di Giuseppe, Jacopo Cabassi, Franco Tassi, Ambrogio Alfieri, Mohaman Dan Azimi, Sergio Calabrese, Francesco Capecciacci, Corrado Castellano, Daniele Cinti, Massimo Crescimbene, Fabio Di Felice, Francesca Di Laura, Antonio Galgaro, Salvatore Inguaggiato, Federica La Longa, Matteo Lelli, Gianluca Lo Re, Valeria Misiti, Giordano Montegrossi, Barbara Nisi, Antonio Troiano, Orlando Vaselli, Nunzia Voltattorni, Fabio Vita, Francesca Zorzi
IRGIE – Inventory of the Geothermal Resources of Aeolian Islands

- 11:45-12:00 **Jacopo Cabassi**, Matteo Lelli, Franco Tassi, Orlando Vaselli, Francesco Capecchiacci, Federica Meloni, Francesca Zorzi, Daniele Cinti, Lorenzo Brusca, Barbara Nisi, Giovannella Pecoraino, Monia Procesi
The hydrothermal system of Lipari Island (Aeolian Islands, southern Italy): towards an estimation of the geothermal potential
- 12:00-12:15 **Antonio Randazzo**, Giancarlo Tamburello, Alessandro Frigeri, Manuela Sbarra, Barbara Cantucci, Daniele Cinti, Dmitri Rouwet, Carmine Apollaro, Emanuela Bagnato, Donato Belmonte, Marco Bonini, Carlo Cardellini, Dino Di Renzo, Domenico Montanari, Giovannella Pecoraino, Franco Tassi, Stefania Venturi, Giovanni Vespasiano, Nunzia Voltattorni, Francesca Zorzi, Monia Procesi
The Emotion Project: towards a national web portal of geothermal fluids
- 12:15-12:30 **Francesco Capecchiacci**, Francesca Zorzi, Franco Tassi, Orlando Vaselli, Lorenzo Brusca, Daniele Cinti, Monia Procesi
A new geochemical characterization of the main fluid emissions in the Friuli Venezia Giulia Region to investigate the geothermal potential of low-to-medium enthalpy systems: preliminary results
- 12:30-12:45 **Artur Ionescu**, Elemer Laszlo, Orlando Vaselli, Laszlo Palcsu, Franco Tassi
Origin and Geochemistry of Fluid Manifestations in the Ukrainian Carpathians: A Comprehensive Review and Novel Interpretations
- 12:45-13:00 **Barbara Nisi**, Orlando Vaselli, Oleg Bogdevich, Igor Nicoara, Franco Tassi, Elena Culighin, Cristina Mogorici, Victor Jeleapov
Geochemical and isotopic investigations of thermo- and mineral waters: Republic of Moldova
- 13:00-13:15 Closing of the Congress

POSTER CONTRIBUTIONS

ENVIRONMENTAL GEOCHEMISTRY

Conveners: Maurizio Barbieri (DST, Università La Sapienza); Elisabetta Dore (DSCG, Università di Cagliari); Nicolas Greggio (BiGeA, Università di Bologna)

EG1. Roberto Buccione, Giovanna Rizzo, Michele Paternoster, Giovanni Mongelli

LucAS project: Evaluation of geochemical-mineralogical background in environmental matrices for the assessment of health risk

EG2. Stefano Natali, Marco Doveri, Linda Franceschi, Matteo Nigro, Antonio Delgado-Huertas, Massimo D'Orazio, Giovanni Zanchetta, Roberto Giannecchini

Groundwater and legacy mining: stable isotopes of dissolved sulfates as a marker of contamination sources

EG3. Riccardo Biddau, Cristina Buttau, Fabio Calia, Fabrizio Cocco, Stefania Da Pelo, Francesco Dessì, Elisabetta Dore, Silvio Ferrero, Antonio Funedda, Maria Teresa Melis, Miriana Pani, Camille Rossignol

Hydrogeochemistry investigations at the Einstein Telescope candidate site of Sardinia (Italy)

EG4. Riccardo Biddau, Elisabetta Dore, Stefania Da Pelo, Rosa Cidu, Mario Lorrain, Paolo Botti, Maurizio Testa

Threshold and source of nitrate in groundwater. Combined method approach using geochemistry, stable isotopes and statistic tools in the Campidano plain (Sardinia, Italy)

EG5. Simone Arrighi, Lisa Ghezzi, Riccardo Petrini, Fabrizio Franceschini, **Silvia Fornasaro**

The Legacy of Hg Contamination in a Past Mining Area (Tuscany, Italy): Hg Speciation and Health Risk Assessment

EG6. Silvia Fornasaro, Lisa Ghezzi, Alessio Tomei, Margherita Cogorno, Nosir Shukurov, Maxim Petrov, Riccardo Petrini

Geochemical assessment of river and stream sediments in the Chirchik-Akhangaran river basin (Uzbekistan, Central Asia)

EG7. Ferrari Martina, Biagi Rebecca, Venturi Stefania, Tassi Franco

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From Fundamental Studies of CO_2 Mineralisation to Functional Minerals

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SOCIETÀ GEOCHIMICA ITALIANA
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 PERUGIA - 01 - 04 LUGLIO 2024